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Agricultural.

STATE FAIR DATES.

In order that our readers may understand the discussion now going on in regard to the dates when the State Fairs have been held, we give a statement covering the last twenty years.

Year.	Date of Fair.	Year.	Date of Fair.
1867.	Sept. 15 to 19, 1878.	1878.	Sept. 16 to 20.
1868.	Sept. 21 to 25, 1879.	1879.	Sept. 15 to 19.
1869.	Sept. 20 to 24, 1880.	1880.	Sept. 13 to 17.
1870.	Sept. 19 to 23, 1881.	1881.	Sept. 13 to 17.
1871.	Sept. 16 to 20, 1882.	1882.	Sept. 13 to 17.
1872.	Sept. 15 to 19, 1883.	1883.	Sept. 13 to 17.
1873.	Sept. 14 to 18, 1884.	1884.	Sept. 13 to 17.
1874.	Sept. 13 to 17, 1885.	1885.	Sept. 13 to 17.
1875.	Sept. 12 to 16, 1886.	1886.	Sept. 13 to 17.
1876.	Sept. 17 to 21, 1887.	1887.	Sept. 13 to 17.

This list of dates shows very clearly that the Executive Committee of the State Society, in arranging their dates for the coming fair, followed their usual custom. The fairs of 1886 and 1887 are fixed for the same dates as those of 1875-76, 1880-81. But the fact remains that the other Societies had met and arranged dates in advance of the meeting of the State Society, and the question now is which is responsible for bringing about this conflict? Each has a strong argument--the State Society that they adhered to a policy inaugurated 20 years ago, and the District Societies that they had met and arranged dates long before the State Society did, and that the management of the latter was fully aware of that fact. No matter which argument is best the result will be more or less disastrous to each, and as these fairs are working for the same object, and are public enterprises in which private interests are not involved, we adhere to the opinion before expressed that some amicable arrangement should be made by which the interests of all would be furthered, and disastrous competition avoided.

RESTORING FERTILITY.

A great deal is being written at the present time, regarding the fertility of soils, the methods of restoring waste, and the causes of decline. This discussion is maintained largely by scientific men who have made the nature of soils a study for almost a lifetime. From the disagreements in both theory and practice among yet about how little men really know yet about nature's laws, and her plans for sustaining the multitudes of earth's living creatures.

The popular argument is that every crop sold off the farm, and every animal disposed of, without a compensating return in kind of the elements which go to make up the perfect grain and the mature beast, is drop by drop exhausting the primeval stock of fertility originally held by the soil, and that in a period more or less remote, lands that are subjected to such treatment must fail to produce good crops. The teaching is, that the phosphates, nitrogen and potash thus removed must be supplied artificially in order to maintain the proper standard of original fertility, that the soil in a sense is a mine, and is exhausted by cropping and pasturing as effectively as mining for coal exhausts the vein.

There is a good deal of dormant opinion opposed to this--opinion, fortified, not by analysis of soils, nor by any extensive tests, but by long years of observation and experience upon the same soil, which has failed to show any evidence of the truth of these scientific assertions. These opinions are very modest, and have the appearance of mere assertion, when opposed to what purports to be actual figures taken from analyses which are accepted as truth by learned men. Thus only one side of the controversy has had a hearing, and all the lesser lights of agricultural literature are echoing and upholding the doctrine that "the prospects for the human race in the distant future would be bad indeed, if in order to produce good crops, the fertility of the soil had to be kept up to its original standard. All we can hope to do is to grow equally good crops upon a poorer soil, by the judicious use of more active manures."

Now the opinions referred to above are to the effect that the soil is a laboratory rather than a mine, where the essential elements of fertility are distilled, or elaborated, or

renewed, according as the farmer provides the conditions. Every good farmer of twenty years' experience knows that certain fields are richer than formerly, where not a handful of manure has been applied other than the droppings of the pastured animals, except perhaps an annual dusting of plaster when the field was in clover; but this will not be accepted by scientific men as supplying the waste of the crops harvested. The oak lands of southern Michigan have steadily increased in fertility for a period of 40 years or more, and such parts as furnished favorable conditions of soil, have doubled the capacity for producing good crops. This has been done within itself, while crop after crop has gone off the soil, and no purchased manures have been applied to counterbalance this constant drain. I believe all soils have inherent recuperative agents constantly at work, and all the farmer is required to do, is to restore, or continue the conditions in order for an indefinite continuance of growth, and by careful maintenance of such agencies as experience teaches are best for the promotion of fertility, the soil can and will improve, not only to supply present needs, but become adequate for all future requirements. The whole teaching of the modern school of agricultural science tends to the belief that the danger of ultimate sterility of soil is imminent, unless recourse be had to commercial manures, or some process be invented for fixing the nitrogen of the atmosphere, with some cheap and ready means of applying it to the soil. This is a commercial idea rather than an agricultural one. It presupposes that the whole thing can be learned in a book, like civil engineering, and does not take into consideration the fact that each soil must be studied in order to understand under what conditions fertility is induced and fostered, and what crops can be successfully grown upon it to promote its increase of productiveness. There is a class of sandy soil so light and non-retentive, that the conditions of fertility cannot be sustained without allowing more rest than is profitable for an enterprising farmer, and one who is not enterprising can soon reduce it to such a state as will exemplify that prophetic period, when for lack of purchased manures the soil refuses longer to support its teeming millions, and famine comes as a consequence.

There are farmers enough who have faith in the power of the soil, when properly handled, to continue and increase its yearly productions, so that the fear of such a catastrophe as is intimated, will not be very widely spread.

CONFLICTING DATES.

FLUSHING, Mich., April 2, 1887.

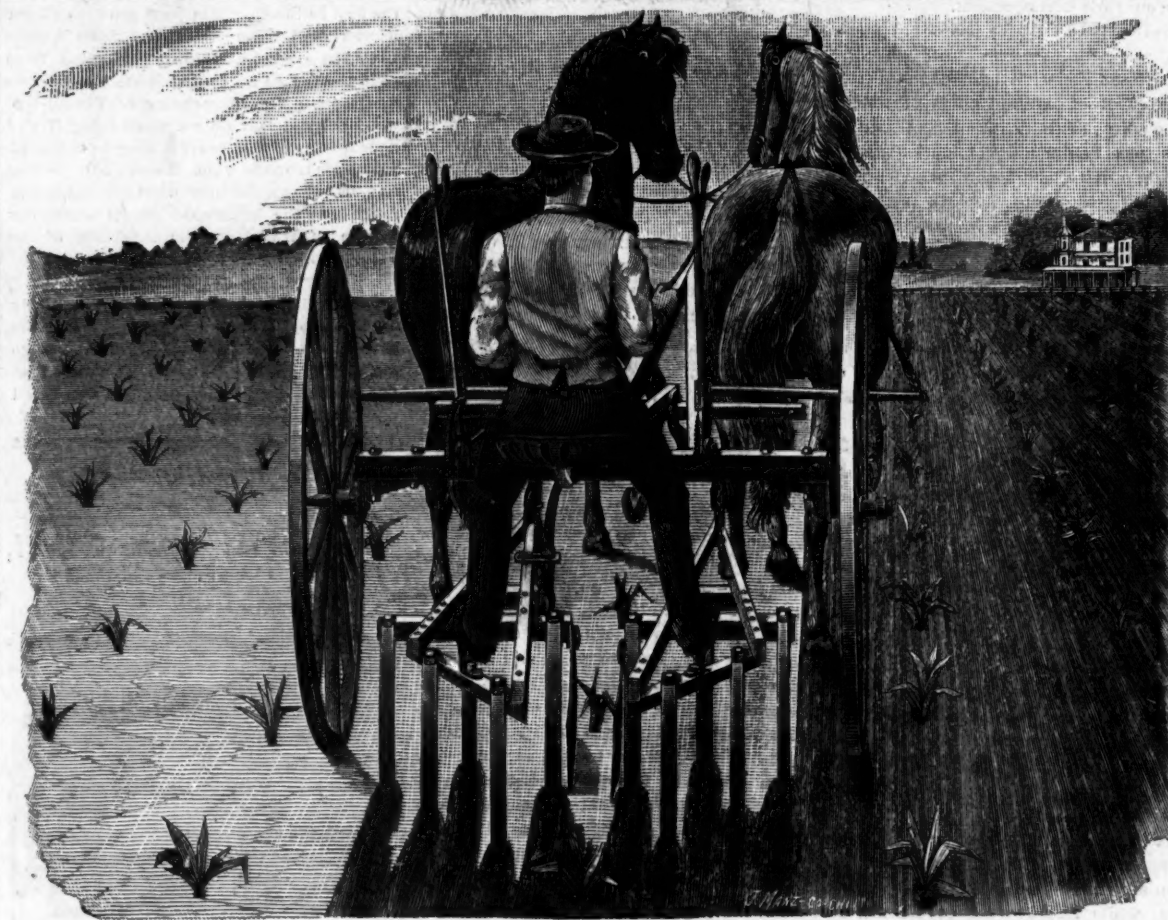
To the Editor of the Michigan Farmer.

In your paper of March 7th I notice an article headed "State Fair" in which you speak of the conflict of dates in time set for holding the Northeastern, the Western at Grand Rapids and the State Fair. You say in your article that you are aware the State Fair has always held its fair beginning with the third Monday in September, and that you would like to see this matter amicably arranged, etc. In order that those interested in this matter may understand it fully I thought best with your consent to write you for publication the exact position in which the Northeastern Society stands in this matter. In the first place, I think the Northeastern and the Western at Grand Rapids have occupied same date for holding their fairs since the organization of the Northeastern at Flint six years ago. So these two societies seem to have a mutual understanding in this respect. A meeting of the directors of the Northeastern Society was held in Saginaw on Tuesday, Dec. 21, 1886, at which time they fixed upon the date of holding their fair for 1887 and chose the following dates, Sept. 19, 20, 21, 22 and 23, which is the third week of September--the same week we have occupied for the years of 1885 and 1886. The Secretary of our Society gave public notice of the dates chosen above, which was published in several papers throughout the State. I think I am correct in saying that the Western Association at Grand Rapids held a meeting about the same time or soon afterwards, and as has been the case in the past chose the same dates that the Northeastern had selected, which were, I am informed, publicly announced. Sometime after this the State Fair Society, or its Business Committee, held a meeting and chose the time for holding the State Fair which, as you say, is the same time chosen by the Northeastern and the Western, and that too, understand, after the two last named societies had selected dates, and in fixing their dates the Northeastern and the Western had selected the third week in September, being the same week in the month they had occupied for the two previous years.

I think, Mr. Editor, when you come to look back from 1880 to 1886 you will readily see you were mistaken when you said the State Society has always held their fair beginning on the third Monday, for during that time the State Fair has commenced on the second Monday three different years, viz., 1880--1885 and 1886. The directors of the Northeastern Fair, like yourself, would like to see this matter amicably arranged, and feeling that they have acted in good faith in this matter think it remains with the State Fair to make the arrangements for changing their dates to the previous week, which, as I have stated, is the same week in the month they have occupied for the two previous years. At a meeting of the directors of the Northeastern Society held at Saginaw on March 28th, this matter of dates was brought up and discussed and the action of the Society at their meeting on the 21st of last December was affirmed, which definitely settles the date for the holding of the Northeastern Fair at Flint on the 19, 20, 21, 22 and 23 of September next.

The question of which is right in this matter we are willing to leave with the public.

JAS. A. BUTTOLPH.



The Spring-Tooth Cultivator Manufactured by the Albion Manufacturing Co., Albion, Mich.

SALE OF THE ROWLEY HERD OF HOLSTEIN-FRIESIANS.

According to announcement, on Tuesday last the herd of Holstein-Friesians owned by Mr. W. A. Rowley, of Mt. Clemens, was sold under the hammer. The day was a cold one, with a sharp east wind, and this undoubtedly kept many away from the sale. The cattle offered were in fine shape, and the herd comprised some of the handsomest specimens of this breed ever seen in this State. They also ranked high as milkers, each animal old enough having shown its quality in this requisite of a dairy breed. The prices realized were far below what every one expected, and had it been known by those interested in the breed in Michigan that prices would rule so low, it is safe to say some of them which went to outside parties would never have left the State at any such prices. Those present were principally the farmers of the neighborhood, many of them interested in Shorthorns, and therefore not bidders. Col. Mann did the selling, and worked hard to get some enthusiasm into his audience; but it was up hill work, and the sale dragged all the time. Mr. Rowley would have been justified in withdrawing the cattle, but he said he had advertised to sell and he would sell everything which would draw out a bid. The entire herd was closed out. The following is a list of the animals sold, the names of purchasers, and prices paid:

FEMALES.	
Malke 2d, No. 107 D. F. H. B.; D. Buttolph, Troy, price, \$40.	
Seipke, No. 120 D. F. H. B.; Smith Bros., Dundas, Ont., price, \$30.	
Kietorp 4th, No. 228 D. F. H. B.; Smith Brothers, Dundas, Ont., price, \$30.	
Belle of Orchard Side, No. 235 D. F. H. B.; Smith Brothers, Dundas, Ont., price, \$30.	
Kaastra, No. 2190 H. F. H. B.; D. Buttolph, Troy, price, \$30.	
Baumba 2d, No. 2073 H. F. H. B.; D. Buttolph, Troy, price, \$30.	
Kietorp of Clinton, No. 2386 H. F. H. B.; D. Buttolph, Troy, price, \$15.	
Seipke 3d, No. 2597 H. F. H. B.; Bruce Phillips, Utica, price, \$140.	
Belle of Orchard Side 2d, by Rothmore No. 320 D. F. H. B.; dam Belle of Orchard Side, No. 235 D. F. H. B.; Bruce Phillips, Utica, price, \$120.	
Ki. terph, by Rothmore, No. 326 D. F. H. B.; dam Kietorp 4th as above; Smith Bros., Dundas, Ont., price, \$60.	
Calneith D., No. 3239 D. F. H. B.; Bruce Phillips, Utica, price, \$40.	
Kaastra's Duke, by Rothmore No. 1850, dam Kaastra No. 2190 H. F. A. R.; D. Buttolph, Troy, price, \$25.	

NOTES FROM VERMONT.

To the Editor of the Michigan Farmer.

After a pleasant call at the FARMER office in the new and pleasant quarters, we boarded the east-bound train on Thursday p. m., March 17th, for a short visit to Vermont, and arrived at Middlebury Friday afternoon. We were soon gliding, sliding and pitching over three feet of snow for Shoreham, with Mr. Ryder, the affable proprietor of the Addison House, for companion and pilot, arriving at the residence of F. & L. E. Moore just before dusk. The next morning was put in in looking over the first prize herd of Shorthorns as shown last fall at Middlebury, Burlington, and Utica, N. Y. They, of course, are in fine shape, and a credit to any State. We also handled their stock ram, Jay-Eye-See, and a party of 50 of his lambs, and can't but say we were well pleased with them. We then got into the cutter and had a call round on J. G. Stickney, who of course had the noted ram, Wall Street, and other good ones to show us, but being pushed for time bade him good bye, with a promise to call again. We next brought up at Jas. Moore's pleasant place, and hurriedly looked over a small party of good breeding ewes and younger

sheep. Our next call was at the residence of Hon. E. N. Bissell, where we had the opportunity of looking over the recently started Galloway herd, which was looking thrifty and nice, especially the cross-bred Shorthorn-Galloway steer, that downed all competitors in his path last fall. Here also is a fine flock of young ewes sired by the now departed but celebrated Goldfinder. Space forbade taking Mr. B. into the cutter with us, and we soon pulled up at the home of the renowned Tyler Stickney & Sons' flock. After looking hastily over Mr. Stickney's embryo herd of Shorthorns, we were soon among the sheep. To try and enumerate individually what we saw here is out of the question, but that this is one of the leading Vermont flocks goes without contradiction. We had a pleasant call at Jas. Forbes' and O. C. Martin's, and were sorry that the snow storm came so that we could not visit the many other fine flocks in this section. Was especially sorry that we did not get to see Mr. Geo. Hall's young ram, for which he has refused \$250 this winter, cheap as the greasy little Merino is. But enough. Although well pleased with what we saw, I prefer to live where the ground is not piled up so high, and where the ground gets bare of snow by the 4th of July.

W. E. BOYDEN.

LEVEL CULTURE.

Intelligent and wide-awake farmers are more and more considering the importance of level culture for the corn plant. A little reflection should convince any one of its importance, though we are not left to theory wholly on this subject, for there have been enough trials of it to show its great value over ridge and hill methods. The old way of cultivating corn keeps and leaves the ground furrowed, obstructing free and natural root-growth of the plant. Level culture secures not only natural growth of the roots, but enables the plant to readily utilize the plant food of the atmosphere freely circulating at the surface of the thoroughly stirred soil. An experiment with level culture is reported in the 1870 volume of the national department of agriculture, which yielded over 150 bushels of corn per acre. In the same series of reports, Mr. J. F. Wolfinger, of Pennsylvania, contributes a paper to the 1886 volume, in which he ably discusses the methods of corn culture, and says:

"If the ground is inclined to become dry, it should be worked so as to keep the surface as level as possible, thus enabling it to retain its moisture."

If the corn crop is cut short, nine times out of ten it is caused by dry weather, and that is only intensified by the furrow method of culture. A very successful corn grower at Germantown, Ohio, writes: "My plan is to cultivate as level as possible, and he reports 105 bushels per acre by this method of culture."

We have referred to these facts for the purpose of calling attention to a comparatively new implement for this work, a cut of which is given on this page of the FARMER. The Albion Manufacturing Co., of Michigan, last year first introduced this Spring Tooth Cultivator, and it was very thorough and tested in Ohio, Northern Indiana, Michigan and other Western States. The reports from its use last year are universally highly favorable, and in sections where a dozen were used last season, hundreds are already ordered for this year. The illustration given very effectively explains its advantages. It secures the perfection of level cultivation. The spring teeth are so arranged to stir every inch of the soil, instead of covering part of it, as in the old way, and yet leaving the surface smooth, thus giving the free natural growth and a perfect circulation of the atmosphere, laden with its moisture and plant food. This implement is bound to have a great run, and work a large advantage to agriculture.

Those who have tried it have had the most

satisfactory results, fully demonstrating what we have always claimed, that this is the correct system of working the soil. The letter below from Arad Lapman, La Grange, Ind., is but the sentiment of many such and we give this, as Mr. Lapman gave the new system a careful test. He says: "Last season I purchased one of the Albion Spring-tooth Cultivators, believing it was built on the right principle, and I determined to give it a thorough test. Through the field where I planted my corn, there is a road used in reaching the other fields. On one side of this road I used the Albion all through the season in working the corn, and on the other side used the ordinary corn plow. The soil was the same, as only this road separated them, but I found the corn worked with the Albion did not wilt and roll up when the dry weather set in, as it did where it was worked with the other plows, and the crop was fully one-third better, so my Albion cultivator more than paid for itself the first season. I also put in a field of oats with it on old corn stubble without plowing, putting in the center attachment, and by going over it twice fitted the ground perfectly, then put on the seeder attached and sowed the oats. I never raised better oats, and it cost less than half as much to put them in the ordinary way. It is by all odds the best paying tool I ever purchased and no farmer can afford to be without one. They will pay for themselves every season they are used."

A great many farmers tried putting in their corn in this way last season where they were sown on corn stubble and uniformly had much better crops than where the ground was plowed and oats put in in the ordinary way. There is a good reason for this, as the action of the frost pulverizes the surface and being exposed to the sun it has warmed the top, and if it only can be worked up mellow, it is in much better condition for a seed bed than the cold ground turned up by the plow. The small teeth in this cultivator, will go into this ground where it is not too hard, and cut it all up fine, while where it is plowed it breaks up more or less in lumps. Then they can as a rule be sown earlier, as many times the ground gets dry enough to work on top, and if it could be fitted quickly the oats could be put in, but before it can be plowed and sowed the spring rains come on and it is often two or three weeks before it is again dry enough to work, while if they had been in the ground they would have had the benefit of these rains. This anxiety to get them in early often leads farmers to plow their ground when it is too wet and seriously injure their land, especially in heavy soils. Another valuable feature of this cultivator is the great variety of uses to which it can be put. It combines in one tool

1 Corn Cultivator which would cost from \$25 to \$35	
2 Field Cultivator disc Harrow or Pulverizer costing from 30 to 35	
3 A Spring-tooth Harrow.....	17 to 20
Making a total of.....	\$70 to \$80

While this only costs \$40 and does much better work than any of them, besides only having one tool to store. Then for \$30 additional a broad-cast seeder can be put on, saving the expense of a grain drill costing from \$50 to \$75, and many think it is better as it distributes the grain evenly over the ground. This however is a mooted question, but for such as prefer seeders, it combines for \$20 a better seeder than could be bought for \$40 to \$50. The cost of tools is an important feature in farming, and who ever reduces this cost by combining tools is a public benefactor, and in this case this is done not only without sacrificing some of the good features of each, but making a better tool in each place.

Farmers are apt to be too slow to change from old methods, but when you can raise one-third more corn to the acre, that one-third is almost clear profit, as it costs no more to fit the ground and cultivate the crop

and only a trifle more to harvest it, and no farmer can afford to stick to the old system. We think much of this tardiness, however, has been for the want of practical tools to carry out the new system, and the fact that this cultivator has become so popular wherever introduced, demonstrates that they were ready to adopt level cultivation when they had a practical tool to do it with. It is with pleasure we recommend it to our readers, for we thoroughly believe in it, and we were not surprised on our recent visit to their factory to find them crowded to the utmost capacity to fill orders. We believe it is just as certain to supersede other systems of cultivation, as the Steel and Chilled Plows have superseded Cast Plows.

—Indiana Farmer.

NORVELL FARMERS' CLUB.

The March meeting at H. H. Raby's on the 26th was quite well attended. The annual election resulted in the continuance of the old officers.

The literary exercises began with an excellent essay from Miss Annie Palmer on the subject of "Home." This she defined to be not merely four square walls, a place to eat, drink and sleep, but a shelter and resting place from the turmoil of life, a place where love, peace, gentleness and courtesy prevail; memories of which lead many back from the paths of sin. Its spirit is prompted and pervaded by love. What often seem to restless youth to be heavy chains of restraint, are seen to be made of loving links. A farmer's home has more natural advantages than any other. Free from the dirt, dust and smoke of cities, surrounded by the pure air of the country, we enjoy all nature's gentle influences, and partake of all her fruits in their freshness. The essay closed with the expressed wish that we might all so live as to gain a place in that home not made with hands, eternal in the heavens.

"Small Fruits" was the subject of a second essay, read by Mrs. R. D. Palmer. She would as soon think of buying all the milk and butter needed, as of depending upon others for small fruits. If the men are too busy, the women can care for the fruit garden, and be the better for getting into the open air, and away from the routine of dusting, scrubbing and baking for an hour a day. The work is not more laborious than that of flower-gardening, now so popular. Less than one-half acre will furnish a succession of small fruits through the season, beginning with strawberries and ending with grapes. Full directions were given for caring for each kind of fruit, which could hardly be repeated in less space than they occupied in the essay. All trimmings and dead canes should be burned to aid in keeping injurious insects in check.

The question as to the effect of a continuous summer fallow for three years was then taken up, and the secretary called upon to read a letter from Prof. Johnson, of the Agricultural College. This letter expressed the opinion that the soil would become richer. A soil thoroughly pulverized and then exposed to the action of the sun, rain, air and frost, must gather up stores of plant food. "On the other hand, if allowed to put up its full growth of vegetation from year to year, nothing being removed, it might be found that the shading and mulching of the land, the vegetable matter decaying and going back directly to the soil, had enriched the land more than cultivation."

This was followed by a paper by L. D. Watkins, treating the subject from a scientific standpoint. Granite rock was originally the source of all our soils. By the slow action of the atmosphere, the washing of water and other forces, it was gradually disintegrated and decomposed, the elements uniting with oxygen, nitrogen, etc., forming various compounds. This process is still going on, and would add to the fertility of the open fallow. All soils have a standard of fertility which may be increased by adding fertilizers, but can not be greatly diminished; whenever any element is reduced below its normal state, nature at once sets to work to repair the loss.

A. R. Palmer quoted several statements from Prof. Kedzie and J. H. Gilbert, of Rothamsted, England, whose lectures are found in the State agricultural reports. He thought the question "to summer fallow, or not to summer fallow," pre-eminently the one on which good farmers disagree.

John Green once saw a two year fallow. The ground was considered worn out, had been run for years. The result was an excellent crop of wheat, and the field has produced good crops ever since.

R. D. Palmer would define science to be a knowledge of the operations of nature. We are often asked to practice scientific farming, which would be that which is in accord with nature. In nature nothing is lost; that which has once been plant food may become plant food again. A summer fallow must lose some of its vegetable matter, but at the same time will absorb from the air, rain and dew, and is better prepared for wheat. Whether increased fertility in the end is questionable. We are urged to apply more labor and increase our yields, but when there is already an over production, would not such a course tend to lower prices still more, affording the producer no recompense for his added labor?

J. Hay and H. A. Ladd do not believe in

summer fallowing, while S. W. Holmes finds that he gets much better crops by the practice. He plows early and likes to work the land after every rain.

President Halladay: Nature has provided everything necessary for plant life in profusion. The most valuable element of manure is nitrogen. While so abundant in the air it is not available as plant food, as it does not enter through the leaves, but through the roots. But by combining with hydrogen ammonia is formed, which is taken up by the soil if it contains humus or alumina. Soils that are hard or crusted over will not absorb ammonia to any extent. Dew contains a large amount of nitrogen; by cultivating when the dew is on we always gain a benefit. Rock is changed to soil by the action of air, hence soils kept loose and friable, aerated, increase in fertility from this cause. It is a mystery how clover, which takes up more nitrogen than any other crop, should yet enrich the soil in this element. Dr. Boyd explains that the lower leaves in decaying, as also long manure, give off hydrogen in its nascent state, which readily unites with nitrogen of the air, forming ammonia to be absorbed by the soil. Ordinarily nitrogen and hydrogen have little affinity for each other.

L. D. Watkins thought it an implication against the Creator to say that the nitrogen of the air was not available as a source of food for plants. It is his theory that the various chemical processes going on in the soil, generate galvanic electricity which causes a union of nitrogen and hydrogen. The next meeting will be at John Green's, on the last Saturday in April, at one p. m. The topic for discussion: "Our friends and enemies among insects, birds and animals."

A. R. P.

THE KENTUCKY SHORTHORN SALES.

The Kentucky spring series of sales of Shorthorns, from the breeding of the stock to be offered and the reputation of the herds from which they come, will be of unusual interest to breeders. Mr. Wm. Warrick, well known from his writings upon Shorthorns, has furnished a short article upon these sales and some of the stock to be offered, from which we make some extracts:

"The coming series of the April sales in Kentucky promise an unusual treat to the purchasers of Shorthorn cattle. It is very rarely that they have an opportunity of putting their own prices on the stock of such men as Messrs. Alexander, Moberly, Estill, and James, etc. But this year, brought from all of these herds will be offered to the highest bidder between the 15th and 23d days of April, and he who seeks not merely pedigree alone, nor yet quality, but a good beast with a good pedigree, will have the best of opportunities of satisfying his most fastidious tastes."

"I have just had the pleasure of a personal examination of the animals which are to compose the offering of Mr. William W. Estill, at his farm of Elmwood, near Lexington, and it was indeed, a pleasure to look over so attractive a lot of cattle as are the twenty head he proposes to sell. They are a very even lot, most uniformly bred, and of much higher individual merit than one often meets in the sale yard."

"His catalogue opens with a half dozen Cyresses that are all nice cattle and are descended from one of the fine old Mason foundations. The imported cow, Cyressa, by Lord of Brawith (10465), was brought to America by Messrs. Jonathan and Samuel Thorne, of New York, and the family has been since bred very largely along the Blue line."

"After this tribe there is no more notable female in this catalogue than number 13, the 2d Goodness of Elmwood, by Imp. Lord Wellington. Like the Cyressa hers is a fine old Mason pedigree. The imported cow Goodness by Onites (4623) was one of the great cows of the old importing companies and was sold at the sale of the Northern Kentucky Importing Company for \$2,025."

"While speaking of the Mason families, I may as well turn at once to number 31, 2d Miss Wiley of Elmwood, a royally bred cow tracing back through 17 splendid crosses to Hubback, the great father of Shorthorns, and through all this time, the cows in her pedigree from the first one recorded down to the present time, their breeders count only four names and all of them great. They are those of Colling, Mason, Wiley, and Alexander."

"Next in order are two exceedingly good Roses of Sharon, the 5th and 6th Red Roses of Elmwood, and a bull calf after the same family, the 8th Duke of Elmwood. These are followed by representatives of two of Mr. Whitaker's most esteemed families. First, Golden Pippin 7th (No. 33) descended from Robert Colling's Golden Pippin by North Star (459) a cow of great concentration of the blood of Favorite (252) in her veins; tracing through Imp. Rosabella 26th, by Velocipede (3352). The other is the grand old Daisy family--that famous family of the Collings from which sprang Daisy Bull, the sire of Duchess, and have descended through Mr. Whitaker's cow Desdemona by Frederick (1069)."

"The last of the females, as she is the last in the catalogue also, (No. 43), is a red heifer Lovely, of Elmwood, out of the Imp. Lovely 28th, bred by Mr. Cruikshank, of Siltion, and belonging to one of the best known of the families bred in that herd which is so rapidly growing famous."

"The sale catalogue contains in addition to the cattle to be sold by Mr. Estill, quite a number from the herd of Mr. David H. James, one of the best and most reliable of our breeders."

A number of our Michigan breeders expect to attend these sales, and we hope to see some rare good ones come to this State.

"The Farm Journal," published at Chicago, Ill., has been excluded from the mails by the postmaster of that city, for publishing fraudulent advertisements. Well, a "cheap" paper must do something to keep itself alive, and when its subscription price is below the cost of the paper it is printed on, it is well for the people to regard it with suspicion.

The Horse.

STANDARD, REGISTERED AND NUMBERED.

To the Editor of the Michigan Farmer.

I wish to speak in regard to an article in your issue of March 28th, entitled "Standard, Registered and Numbered," dealing with the statements contained therein regarding the Michigan Farmer.

The rules governing admission to the Standard are purely arbitrary and are liable to change, so that a horse eligible to registry to-day may not be so to-morrow. It is impossible to fix a set of rules governing admission that would include all horses of merit without letting in some that had no merit. As it is there are hundreds of Standard horses that are not worth the food they consume, while there are many very promising young colts that are not Standard. According to the rules no horse can be registered as non-standard that is not well up in trotting blood. This is designed to give recognition to well bred colts that owing to some technicality were not Standard.

Let us imagine two cases as follows: Take a heavy, low-built Clydesdale mare, bred here to the poorest little rat-tailed horse you can find, with no speed in him, and none in his ancestors, with nothing to recommend him except that he has a number. If the produce of this union is a filly, you can breed her to some other coarse, wretched standard brute and if you get a horse colt here you are with a registered, standard and numbered stallion, eligible under rule seventh.

For the other case take a mare bred as follows: Sire, a non-standard son of American Star; let him have a pacing record of 2:30. Dam, by Alexander's Abdallah. Breed this mare to a horse bred as follows: Sire, a non-standard son of Almont; let him have a pacing record of 2:30. Dam, by Volunteer. The produce of this union is not eligible to registry as standard. Which would be likely to get the best colts of the two? Such cases are not only possible but quite common.

No pacing horse, however meritorious, can make himself standard by performance, although some of our best sires of trotters are pacers. Now, I should say, if you want speed, look for it through parents that have speed and who are descendants of speedy ancestors. If they are standard all the better, but don't patronize a horse that has nothing to recommend him but the fact that he is No. 630 or 640; for with a dash between the six and the 40 the figures may possibly represent his speed as well as his number.

BROOKLAND, Mich., April 8, 1887.

For the Michigan Farmer.

NOTES ON HORSES BY A FRENCH CORRESPONDENT.

A GERMAN agricultural journal has closely examined the feeding influences of hay on horses. That from meadow is best for pure blood, saddle horses, or those employed for quick locomotion. Clover hay suits draught horses, because unfavorable for respiration, even when carefully saved. It is further more liable to deterioration than meadow hay. Aftermath hay being more tender, is less masticated by the horse and swallowed with great avidity, hence, digestive derangement, and why it does not suit horses destined for speed. If the latter be fed on this class of hay, they transpire easily and abundantly.

MESSES. HYNDERICK and Fibergien are acknowledged authorities on Belgium horses—now a specialty in their country. Like the Percheron, which is being run close by the Belgian horse, the latter comprises two varieties, while constituting only one race. The gentlemen in question head a movement for maintaining the purity of the race, and to ameliorate the two varieties—the heavy dray and the light van and omnibus horses, by means of a severe control in the selection of breeding animals, the founding of breeding studs, and the keeping up an authorized stud book. Importers of European horses cannot too closely watch the Belgian market.

COLONEL HENNEBERT states that during the period of six years, 1875-1880, the number of horses entered in the veterinary hospitals in France, has increased from 59 to 100 per cent. During the same period, 15,575 horses belonging to men and officers, have died. This death rate of nearly 3,000 per annum, represents a yearly money loss of five millions francs.

The Colonel draws attention to the feeling of repulsion that the majority of horses manifest for the stable, and believes it is owing to the unsatisfactory nature of the lodgment; to the bad flooring of the stable in the majority of cases, which by percolation often converts it into a permanent generator of infectious odors. He dwells at much length on the slope of the floor of the stalls often two inches in the yard, to carry off the drainage. "Which do you like better," asked an Arab of his horse, "to ascend, or descend a hill?" The horse replied: "May God curse the point of junction." The noble animal was right; the declined bed begets fatigue. It is this exhausting slope, observes the colonel, which is the cause of the infirmity of many mares, and the absence of profligence on the part of so many stallions.

Wallace's Year-Book of Trotting and Pacing.

The second volume of this most valuable annual, covering the year 1886, has just reached our table. It is embraced in 340 large octavo pages—about seventy more than last year—closely printed, and every line a fact. The labor in its preparation has been immense, and the workmanship in its manufacture is first-class. It is bound in green cloth, with flexible covers, and how such a volume can be compiled and published at the nominal price of \$1.00 is beyond comprehension. The first part of the volume, extending to 192 pages, is devoted to the trotting and pacing summaries of the past year where any heat was made in 2:50

or better, all carefully revised from the most authentic and reliable sources, and an index to every performance and performer. Important and valuable as these summaries may be in showing what has been done in the past year, they are of but passing and transient value when compared with the great tables that follow, in which may be found every important fact of all past experience. All trotting and breeding history is here condensed, and every lesson it teaches may here be learned. The table of all 3:30 performers under their sires not only embraces the performers themselves, but every son and every daughter of that sire that has got or produced a 3:30 performer is added, with the number credited to each. The table of great brood-mares not only embraces every mare that has produced two or more 3:30 performers, but every mare that has produced one performer and the sire or dam of a performer. The table of sires with nothing to their immediate credit in 2:30 or better, but with sons or daughters that have got or produced 3:30 trotters, is a new and most satisfactory feature in this class of statistics. The closing table embraces the fastest records of all periods of time, at all ages, at all ways of going, and at all distances. Taking the work altogether, it is by far the most valuable ever issued on this subject. Here we have the very cream of all trotting and pacing horse knowledge, and it comes from the highest authority in the world on the subject. No intelligent horseman or breeder can afford to do without it, and by remitting \$1.00 to John H. Wallace, 280 Broadway, New York, it can be secured by return mail.

Sand Crack.

A sand crack consists of a break or fissure in any part of the horny wall of the foot, commencing at the coronet, and is generally found on the inner quarter of the fore and the toes of the hind feet. A sand crack usually appears by slow degrees, but may come on suddenly by some injury. Before its appearance the horse is imperfectly secured, is dry and brittle. Some horses are very liable to these cracks; and when a cure has been apparently effected they are very apt to return, but the cause for their return must be looked for from the effects of bad shoeing.

A sand crack commences at the upper margin of the wall of the hoof and is usually very small at first; but it gradually extends downwards and inwards until it has penetrated through the horny structure, when lameness becomes apparent. Inflammation is set up both in the laminae and within the skin above the fissure, the part becomes very painful and the lips of the wound gap as the tissues swell. When the animal is made to move the crack is seen to close every time the foot is put to the ground, and to open again as soon as the weight is removed; when it closes in this manner the borders of the crack grasp some of the swollen tissues causing severe pain, and occasionally hemorrhage. The sand and dirt that is grasped as the crack opens act as an irritant which gives rise to the suppurative action.

Treatment.—If inflamed remove all sources of irritation and pare the edges of the crack if they press upon the tissues and allow the escape of pus, dirt, etc. Remove the shoe and give light purgatives and rest, with fomentations to part affected. A fungus growth may be seen filling the fissure, which is the result of the inflammation, and disappears upon its subsidence. After the inflammation and pain have subsided place a bar shoe on the foot but remove the pressure from the part immediately below the crack. A sand crack never unites and a new crust must be grown.

There may be clasps applied to the crack to keep it from spreading apart. This may be done by cutting a notch with the drawing-knife about half an inch from each side of the crack and about a quarter of an inch deep and large enough to allow the imbedding of the head of a horseshoe nail. The nails are carefully driven into the horn through these notches and the crack being closely drawn together with the pliers, the clinches fastened and the whole rasped down smooth. This method is to prevent all motion of the crack during the movements of the animal. In this way a horse may be employed for his usual work during the growth of the new horn.—F. W. Hoxkins, in Student's Farm Journal.

Horse Gossip.

It is now reported that Secretary T. J. Vail, of the National Trotting Association, will resign after the May meeting of the Board of Review. Better late than never.

SENATOR STANFORD, of California, recently sold three colts by Electioneer to the Japanese Government. Price, \$4,600. The American trotter is gaining in reputation abroad every day.

MR. P. M. ROWELL, of Corvallis, has sold to Jacob Seligman, of East Saginaw, the trotting bred mare Kate Rowell, by Beryl Abdallah, bred by Louis Napoleon. Price received, \$1,500.

LORENZO A. SUTTON, of Lyons, Iowa Co., has a gelding that is 45 years old and still in active service for a driving horse. He has never been sick nor missed a meal in his life. He is French and Morgan blood.

The number of horses exported from the port of New York during the past four years, and their value, was as follows: In 1883, 510 head; value, \$161,700. In 1884, 498 head; value, \$151,635. In 1885, 378 head; value, \$145,451. In 1886, 388 head; value \$159,255.

PHYLIS, 2:15½, a mare, was purchased by Prince Smith, of Vienna, the party who purchased and now owns Gladys, 2:30, and Hambleton, 2:30½. These horses have done well in their new home, and defeated all comers, including a number of Russian trotters of high reputation.

W. L. SCOTT, the millionaire Congressman, who has within four years invested \$500,000 in a racing stable and breeding farm, has determined to sell out. He thinks that racing is too corrupting for his morals. He found his trainer in "cubholes" with book-makers, and threw up the business in disgust.

SENATOR STANFORD has a colt born to him every day in the year on the Palo Alto farm, and he never sells an animal for less than \$1,000. When he sells he gives a printed guarantee as to pedigree and health, but never as to speed. He guarantees a good walking gait, but says nothing about trotting

or better. None of his stock is ever speeded for over a quarter of a mile at a time.

SALE OF ALGER (5810).—Eugene M. Kies, of Reading, Hillsdale Co., Mich., has sold to Miles Cartwright, same place, the promising two-year-old black stallion Alger (5810), bred by Hambletonian Wilkes (1679), by George Wilkes (519), dam the dam of Idlewild 2:30, (nace), by Star Hambletonian (1834), whose breeding is identical with that of Masterdote (595). Alger is bred in the Hambletonian and Star lines, standard and registered in Vol. 7 Wallace's trotting horse register.

The Farm.

From our Paris Correspondent.

DAIRY MATTERS IN FRANCE.

Professor Fleischmann's conclusions, as to the effect of different kinds of food on the quality of milk, are important. He finds pea haulm unfavorable to the production of milk, and barley straw, if taken in too large quantity, imparts bitter taste to butter. In the case of potatoes, when mixed with other forage suit best if cooked, fattening cattle, and raw for milk cows. If more than 30 lbs. of tubers be given as daily ration in proportion to a live weight of 10 cwt., or even if the roots are not mixed with half their weight of cut straw, the butter will always turn out hard and insipid.

When mangolds, in the proportion of 32 to 36 lbs. per 10 cwt. of live weight, are given daily, and mixed with the eighth or tenth of their weight of cut straw, the cows yield a milk, giving a rich and good tasting butter. Carrots do not augment the secretion of milk, but the butter will be excellent in quality; turnips promote the yield of milk, but favor the butter proportionately to the quantities given. Frozen roots, either alone or mixed, give a strong flavor also to the milk; roots thus affected should be sliced, and when acidified, consumed.

Crushed peas and tares produce a butter hard in consistency; oats, suit and wheat between both. Strange that while peas favor the secretion of tares do the contrary; beans exercise no marked favorable action. Bran makes the butter soft, so does rape cake, while linseed cake produces a soft butter. Not more than 3½ lbs. of either cake, per 10 cwt. of live weight, ought to be given daily to milk cows. Respecting distillery residue, if given in more than 55 lbs. daily, the milk resulting will be thin and clear, the butter soft, not keeping well, and having a tendency to become bitter.

M. Mayer, of the Wageningen experimental farm station, has just analyzed the comparative value of the various Dutch cheeses delivered to commerce, namely those of Leyden, Gouda, Edam and Tessel, which contains some sheep's milk. They contained respectively, 11, 21, 25 and 18 per cent of fatty matters, and 36, 34, 30 and 30, of caseine and other nitrogenous substances. The Gouda, Edam and Tessel are rich cheeses, possessing a higher degree of digestibility than Leyden. This explains why the latter sells at so inferior a price, and why curraway seeds, clover and other species are added to excite the secretion of the gastric juices. The green color imparted to the Tessel cheese, M. Mayer is not a liberty to reveal how it is done; in the case of the celebrated Roquefort cheese prepared in France, from sheep and goat's milk, the greenishness is produced by allowing it to ripen in a calcareous cavern, subject to the influence of fungi. In Swiss cheeses the green color is effected by means of a vegetable extract, that imparts a savory taste at the same time. The Leyden cheese is salty, perhaps due to chance.

In Germany the plan is extending of selling milk by weight and not by measure. M. Page, of Langruth, has registered the yield of milk from his 35 milk cows, during the last two years. He finds that there is a marketable difference of thirteen per cent, between 100 quarts of milk warm from the cow, and when that milk is allowed to cool. The purchaser loses that percentage, if the milk be measured warm, and the farmer, if he accepts it when cold. In Switzerland milk is now nearly purchased by weight, and eggs are tending to be similarly dealt with.

Woman as a Stock Breeder. Mrs. H. C. Meredith, widow of the late H. C. Meredith, a son of Gen. Meredith, well known in stock-breeding circles is described by Ben. Perley Poore, in the American Cultivator as a handsome woman wearing stylish clothing, and owns at Cambridge City, Ind., the finest herd of Short-horn cattle that there is in the State, and breeds, and sells, and pushes her business alongside of the best known cattle fanciers in the country. She could discuss constitutional breeding and high priced beef with any man at the Fat Stock Show. She knows just how an animal's frame should be bred, and just how fat and how round his bones should be; how his ribs should be sprung; how the upper loin should slope, and how the lower. She could tell from its throat-latch whether the animal had a pedigree worth having, and from the shape of its frame around the heart whether it was hardy or sickly. There was not a man among all the famous cattle owners and breeders there who knew these things any better than she, or who had more pedigree in his head, or who could tell quicker whether an animal was in the "record" or not, or whether it could get in the record.

Gen. Meredith, when he was alive, was one of the pioneer fine cattle breeders in the country. He became rich as the craze for high-priced, imported Short-horns grew, until in the '60s and the early '70s he was worth probably \$500,000. He had the Aldries, and paid \$10,000 as readily for a bull that happened to be after his own heart as more conservative men paid out money for good lands with houses on them. But the general went broke when the craze subsided. His son failed after him,

but the widow, with all her style and grace, had a better head for business than either the husband or son. She took the herds that were left, and managed them, and where both men failed, she succeeded. Her sale a few years ago was the most successful one in the country with one single exception. Her sleek cattle averaged a price that had heretofore been unheard of. She breeds the "Wild Eyes," and they are known wherever fine cattle are, and her herd of forty head earn her a handsome income every year. Let no one complain that women do not have their "rights," when this woman can take the lead of the great cattle-growers of the Republic, even going ahead of Mr. Sadowaky, the richest herder in the Mississippi Valley.

Ergoted Grasses.

The Royal Agricultural Society of England in recent years has devoted attention and funds to the forwarding of veterinary science; and in the recently published Journal presents an interesting paper on several outbreaks of abortion in cows occurring in the neighborhood of Kirby Overblow, Yorkshire, by C. J. B. Johnson, L. R. C. P. Prosecuting his medical practice in a rural district, Dr. Johnson has had considerable opportunities of studying abortion, and has made good use of these opportunities. His published observations extend to thirty several farms, and comprise 300 abortions, which represents to the owners an average loss moderately estimated at £8 each. The injuries, malposition of the uterus, overdrinking, fright, drinking of ice-cold water, seizures of hoven, or of mouth-and-foot complaint, the occasional accidental causes of single or sporadic cases of abortion, are rightly dismissed as not explaining the more widespread attacks which often occur in a herd or in a locality. Stagnant, polluted water, which not infrequently leads to abortion, the reporter declares to be unknown in this well watered portion of Yorkshire. Full details furnished of the recorded outbreaks indicate that no blame can be attached to faulty or diseased bulls. In this portion of England the mishap is generally ascribed to contagion, or "smut," as it is locally termed, and precautions more or less effective are hence usually taken to prevent its spread. No corresponding disorder occurring in human patients as a result of contagion, the doctor however was indisposed, without further evidence, to accept the contagion theory as the cause of the bovine abortions, which during the past seven or eight years he has met with in his neighborhood. His observations and inquiries lead him to the conclusion that ergoted grasses, hitherto unsuspected and unrecognized, have been the invariable cause of these attacks.—North British Agriculturist.

Lice on Poultry.

The American Cultivator gives the following as a remedy for the above: Lice are the worst enemies of chickens, and in this case, as in every other, prevention is easier and better than cure. A few tobacco stems broken up and sprinkled in the nest, or carbolie powder, are aids, but if the hens are lousy, and most farmers' hens are, the best cure is to sprinkle about a teaspoonful of Dalmatian powder, or some other good insecticide, through the hen's feathers, while holding her by the legs, head downward. Repeat this treatment three or four times, a couple of days apart, and the hen should be free from lice. If the hens are lousy, the lice go for the chicks at once, and no wonder, as they are tender and juicy, choice eating for the vermin. The old remedy was a little dab of lard or fresh butter under each wing and on the head, and if the hens are lousy this is a help; but it is vastly better to fight them on the hens before the chicks attract them. Chickens cannot thrive when swarms of lice are feeding on them, and as it is essential that the chicks shall grow, and grow vigorously, from the first day, the lice must be conquered.

Agricultural Items.

SWANWICK's celebrated herd of Berkshire swine, located at Cirencester, England, which had won over \$5,000 in prizes, was recently dispersed at auction. The animals averaged over £5, or about \$40 each.

An Ohio farmer says orchard grass will grow through a thicker coating of manure than any grass he knows, hence he recommends it as best for meadows that are liable to overflow. Red-top will outlive all the rest of the grasses under water.

A CORRESPONDENT of the Indiana Farmer feeds his swine all the salt they will eat, and part of it he mixes with sulphur and ashes. He takes care that their sleeping place is not so warm that they come out of it sweating, and says his swine are always healthy.

meal to each cow. His wife tells him that when he cannot afford to feed meal to his cows in summer he had better give up making butter. Feeding meal in summer hardens the butter so it is easier handled and arrives in market in a more satisfactory condition.

The world is a few thousand years old, keeping within the safe records, and farmers have tilled and maintained farms since time deeds were invented, yet they have not yet settled the different degrees of durability between two, tops and lower ends in the earth.—Husbandman.

It is said that Minnesota and Dakota farmers who last year foolishly burnt their straw, and their stocks of hay exhausted by reason of the long and severe winter, and would find that so lavishly destroyed an important help, if they had it. Straw is worth from two to three dollars per load.

E. E. WOOD, a Vermont dairyman, feeds two quarts of corn meal to each mature cow in summer, and for many years has made 300 pounds of butter per cow from the entire herd. Last year it fell a little short, 280 pounds. His hay is all cut early, most of it before blooming, and with it is fed three quarts corn meal, one quart of bran and a pint of oatsmeal.

THE N. E. Farmer says: "The English sparrow must go," but tell us, please, how to make him go." The Michigan Legislature has set a price upon his head, a bounty of one cent apiece. But there is a money in local treasuries set apart to pay this bounty; and in most cities and towns of the State, where the little nuisances do most congregated, there is an ordinance which forbids discharging firearms within the city limits. The small boys waver between desire to earn spending

money and fear of the consequences of violating law, and the sparrow waxes fat and saucy.

"JOSEPH," a writer in Farm and Garden, who has grown potatoes quite extensively, says that only in case of unusual scarcity or extremely high price of seed potatoes would he advise cutting medium sized tubers at all, larger ones more than once, or the largest in more than four pieces. This he claims is the conclusion drawn from many years of experiment and observation. He asserts that the yield from a whole seed tuber is larger than that from cut seed of equal weight. This, he says, shows that it is by no means the quantity of seed alone, which determines the outcome; and he would have every potato grower learn to understand the great importance of planting one large seed piece to a hill in preference to two or more smaller ones.

JOHN M. STAHL, in the N. Y. Tribune, reminds farmers who are making fences this spring that timber from very rich soil makes less durable rails than that from poor soil. Also timber from a northern slope makes more durable rails than from a southern slope. This comparison refers to trees of the same sort, as hickory with hickory, for the best rail timber does not grow at all on barren land. The heartwood lasts longer than the sapwood, and the best plan is to split the log so as to distribute the two as near as may be among the rails. The all-sapwood rail will last only a short time; if put near the top of the fence it may be beroppled with little trouble when it gives out. If the rail, half or more of heartwood, be laid in the fence with the heartwood up, its durability will be measured by the durability of the heartwood.

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RECORD 2:28 1-2.

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Olmedo Wilkes 3770

Four Year Old Record 2:41.

By Onward, record 2:24; son of George Wilkes record 2:32; first dam Alma, by Almont 3:1; sire of Westmont, record 2:13½.

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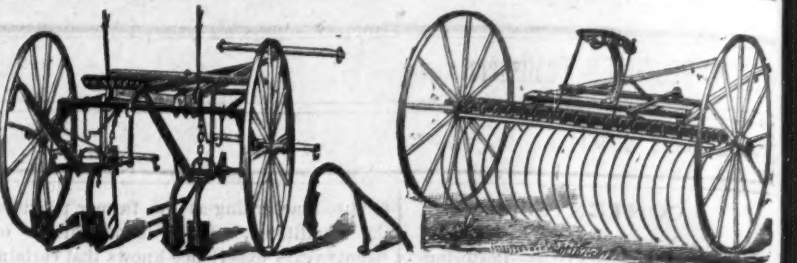
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These Plows are made with a Reversible Steel-Bar-Point 24 inches long. The Point is fastened by base of Plow by a 3-inch Steel-Set Screw in a Steel Nut. The Point can be adjusted to any condition of the soil by increasing or decreasing the length of Point, and remains same amount of action at all times. When point is worn off or leveled on under side it can be reversed, thus making it a positive self-sharpening Point. This is the greatest invention of the age. We also manufacture the ordinary style of Chilled Plow both right and left-hand, with Straight and Bending Landriders. The Hoes and Harrows to Plows made adjustable. Gale Patent Standard Jointers and Knee Couplers conceded to be the best in use.



Gale Riding Cultivator. The most complete and Walking Cultivator on the market. Made

Poetry.

PULPIT AND PRESS.

Together they lay in an humble crib,
Two fax-haired babes with eyes of blue;
In childish play and homely toil,
Together upon one farm they grew;
Then one chose preaching the word of grace,
And one filled up an editor's place.

The parson preached and expounded well
The gospel truth and the power of prayer.
His sermons fragrant as Harman's dew,
His labors blessed with a tender care;
But his church was stylish and well fenced in,
From the common saints and the elves of sin.

The editor tolled with weary brain
To push the world in its destined way;
His words had often an earthy strain,
But he spread them broadcast day by day.
On a plain, unvarnished business plan,
And one called him a pious man.

They died, apart, in the self same hour,
And winged their way to the golden gate,
Where the parson entered, filled with joy,
To claim his sacred and high estate.
The angels met him with words most sweet,
But led him off to the humblest seat.

The editor meekly entered in,
And looked around for a lowly place;
But the angels—clustering round about—
With music sent to the songs of grace,
With crowns of laurel and wreaths of palm
Thrilled deep the air with their triumph psalm:

"Blessed is he that overcomes,
Working bravely, demanding naught;
Nothing expecting, he shall be crowned
With the jewels his labors wrought!"
Then they placed him upon a throne.
Thus did the heirs come to their own.

—Chicago Inter-Ocean.

L'AMOUR.

Love is joy and passion pain;
Love is true and passion vain;
Yet twin-like, for passion glows
Through love as color thro' the rose,
And love which knows not passion's bloom
Is like a rose without perfume.

Say not I am dear the while
You lightly seek my rival's smile,
Soul and being yield one heart,
Love and Life divided part.

Miscellaneous.

A COMPANY OF THREE.

"Two's company, three's none."—Old proverb.

CHAPTER I.—A MAN'S WILL.

Lumley, the well-known auctioneer, and his friend, Wybert Moss, were talking about John Pawson, and they agreed that he was one of the best men in Swarthorn, and they rejoiced at his prosperity in life.

"He has nothing to trouble him," said Lumley.

"And plenty of money," replied Moss, "which is more than I can say about myself."

"The same old tale," was Lumley's laughing answer, and he hurried away.

But John Pawson had a good deal to trouble him just then, as he often said to himself when he was alone, for he had formed the habit of speaking his thoughts, and sometimes did so even in company.

He entered Burtonford's bank when he was a boy, and was always a favorite with the late Mr. Anthony Burtonford. Nobody was surprised when John Pawson became a partner; it was in accordance with the fitness of things. But what surprised the public was that Eric Burtonford, the banker's nephew, was sent adrift.

"I would rather be a customer at the bank than a clerk there," was what Lumley said to Wybert Moss. "Old Burtonford is not the best man in the world to get on with. His temper is all thick and thin. His good qualities are in great lumps; but, before you know where you are, he is raging and storming like all that." Wybert Moss said that he knew very little about bankers, but he would take his informant's word for it.

"Always trust the auctioneer," said Lumley.

"Certainly," replied Wybert. "I will trust him with my debts, if he will take charge of them."

Then there was a laugh, and the two parted.

The general opinion in Swarthorn was that Anthony Burtonford had quarreled with his nephew, and that the uncle's temper and Eric's pride had been too much for him. But Eric went away from Swarthorn, and did not return even when Mrs. Burtonford, the banker's wife, died.

"Eric's in London painting pictures," said the goosses, "and he ought to have come to the funeral, though he is not even nephew to Mrs. Burtonford; but if uncle's wife is not kinship enough the world is coming to a pretty state."

So Eric was blamed for his omission of duty. But the banker said nothing. He never mentioned his nephew's name, and never allowed anybody else to do so in his hearing. It was usually thought, however, that John Pawson was an exception to this rule, and the conjecture was right; he knew why Eric had been sent away, and why he did not appear at the funeral.

Then Mrs. Burtonford died very suddenly, and rumor was busy again. Eric would be sure to come this time, and he would remain at Swarthorn and take his uncle's place at the bank. Picture painting was all very well in its way, but it was not reasonable to suppose that it could ever be permitted to interfere with a bank. Moreover, there was Edith Markham, the late Mrs. Burtonford's niece. Everybody had always said Edith and Eric were intended for each other, and everybody felt that it would be a great shame if the general expectation were thwarted.

But the funeral took place, and Eric was not there.

Then by degrees the truth leaked out about the banker's will. Popular feeling became divided at once.

"Eric Burtonford is no good," said the spokesman of one party. "There is something under the surface which we have never seen. His uncle has not left him a brass farthing. Why, the worst case I ever heard of before was not as bad as that. To be cut off without anything beats the record in this kind of business. The banker has left all he had to Edith Markham, but if ever she looks at Eric, or speaks to him, she is to lose her fortune."

"You are partly correct," said the spokeswoman on the other side of public opinion. "Some of your facts are wrong, and your inferences are completely so. We all know that Mr. Burtonford was passionate and headstrong. My opinion is that Eric only said his soul was his own. But the will does not declare that Edith is to lose her fortune if she speaks to Eric; she is not to do so without the consent of John Pawson."

Perhaps it is true that rumor is seldom altogether wrong, and never altogether right. The will of the banker was that, after certain legacies had been paid, including a large one to John Pawson, the residue should be held in trust for Edith Markham. But there was this strange condition in the will. If Edith, during the time that she remained unmarried, had any interview or held any communication with Eric Burtonford, except with the consent and in the presence of John Pawson, she should forfeit her share of the property, and it should be held in trust for Robert Lumley, auctioneer, and Wybert Moss, of no particular calling. "I have no liking for these men, but they are both keen enough to look well after their own interests. I cast no reflection upon John Pawson, but I would rather not leave him the task of disinheriting my wife's niece, should there be need for it." So said the banker.

Mr. Burtonford had written his own will, but it was properly signed and witnessed, and was perfectly legal in spite of many strange remarks and unanswerable phrases.

Both Lumley and Moss knew that the banker's use of their names, and often wondered whether they would benefit by this eccentricity, or remain always mere watchers, waiting to see if the course of events would produce any change in the attitude of Edith and Eric toward each other. As far as they knew, Eric had not been near Swarthorn, and Edith had not seen him anywhere else. Sometimes they asked John Pawson about the affair, and he always answered in his calm, serious manner, that the provisions of Mr. Burtonford's will would be strictly carried out, but, as far as he knew, nothing had happened which called for interference.

"John Pawson will do the square thing," said Lumley to Moss. "My fear is that those two did not care as much for each other as people said."

"It is awkward," replied Moss. "As a rule, a will like Burtonford's would kindle love where it never before existed. There is nothing like opposition for strengthening affection. But, as usual, the one exception to the rule keeps me poor."

John Pawson often talked to himself about Eric and Edith. He had known them since they were children, and had believed that their fondness for each other would ripen into true and lasting love.

"I know that Mr. Burtonford would have been pleased if he thought that Edith cared for me," John murmured with a blush, "but that is impossible. I supposed she liked Eric very much, and yet she never mentioned him. He was fond of her too, and yet he has kept aloof. I sent him word about his uncle's will, and he acknowledged my letter in a very manly way, but I have heard nothing since. He has been badly treated if he was innocent; yet I cannot see any explanation of the affair, unless he took the notes."

Then he reviewed again, for the hundredth time, the bank that had told him about the quarrel with Eric.

"I was in my library at home, John, and I had ten notes on the table; three were £50 notes, and the other seven were £10 notes. I wanted them for a particular purpose. I had just finished entering the numbers in my diary, when Eric came in. I told him to sit down, for I was busy. I wrote up my diary; then I was wanted in the drawing-room for a minute. I just glanced over the table, and left everything as it was. Perhaps I was absent five minutes. When I returned I found Eric seated where I had left him. Then I wrote a letter and took up the notes to inclose them. It was a private affair, John. I took up the notes, and the three fifties were missing. Eric declared that nobody had entered the room during my absence, and that he had not moved from the chair. I am sure nobody had been in but myself between the time when I entered the numbers and the time when I went to the drawing-room. No window was open, and there was not a fire. I told him he must turn out his pockets, and he refused to do so. Then there was a scene. I sent for Edith and told everything to her. Again I asked him to turn out his pockets, but he still refused. So I ordered him out of the house and told him never to show his face in Swarthorn again, or I would give him in charge of the police. I am glad I always made it clear to him and Edith that there must be no billing and cooing between them. Edith is too good for him. What a wife she will make, John, in a few years! She is young yet, I know, but if she had a husband of steadiness and experience—a man like you—it would not matter. I am glad there was no billing and cooing between her and Eric."

John Pawson had his doubts about the banker's surmise respecting what he called billing and cooing. Edith lived with the Burtonfords, and had lived with them all her life. Eric lived with a married sister, whose husband was an artist. He was three years older than Edith, and was just 21 when his disgrace came upon him.

"These young people cared more for each other than Burtonford thought," said John Pawson to himself. "Has the trouble killed their love, or are they waiting for better times? I do not see where the better times are to come from, unless everything about those notes is cleared up. Could Mr. Burtonford be mistaken? The only time he ever spoke harshly to me was when I suggested that."

Thus John Pawson had reviewed the matter hundreds of times, but his perplexity remained. Then, two years after the banker's death, he received a letter from Edith, who was staying with some friends in Scotland, and who wrote asking that he would arrange for her to meet Eric, as she could clear up the mystery which had perplexed them so long. She said:

"Tell Eric when you write to him, please, that everything can be explained. Let me know when the interview is to be, and where. I wish to observe the conditions which my dear uncle laid down, but Eric must not remain under an unjust suspicion any longer."

It was an embarrassing position for John Pawson. He wished Edith had been more explicit. From what he knew about her he did not think she was likely to raise hopes which would not be fulfilled. But how could he explain anything?

He wrote to Eric as Edith had desired, and received a prompt reply by telegraph, saying that he should be in Swarthorn that night. Eric saw John Pawson; but John could not explain anything.

"We must wait till Edith comes, Eric," he said, "and you must not see her except in my presence. Lumley and Moss will not miss a chance."

Eric consented. He met Lumley and Moss the next day, and these two worthies seemed afterward to be in better spirits than usual.

"To be or not to be?" said Lumley.

"That's the question," replied Moss.

CHAPTER II.—A WOMAN'S WAY.

Edith Markham could not remember either her father or mother. Her mother was dead and her father was married again and lived abroad. That was all the information vouchsafed her.

Among Mr. Burtonford's papers was one which was addressed to Edith, in the banker's handwriting, with this instruction: "To be given to her at my death, but if that should happen before she is 21 she must keep this without opening it until that time. It is about her mother and father, and she need be in no hurry to learn the particulars."

She was 19 when her uncle died, and the executor—John Pawson and Bardsley, the solicitor—gave the paper to her, according to the instructions which the dead man had left.

"There is a good deal of writing there," said John. "Would you like to keep it, or shall I take care of it for you until you are 21?"

Edith thanked him, but kept it herself. The strange misfortune which had happened to Eric, and the death of her aunt, then the death of her uncle, had crushed her spirit. She could not help wondering whether her mother had been also unhappy. But she placed the paper in her desk and gave herself over to sad thoughts. When would the mystery concerning Eric be cleared up? Cleared up it must be, she felt sure. Then she read a note from him which he had sent to her at the time of the trouble:

MY DEAR EDITH:—There is a terrible mistake somewhere, but my uncle is sure to discover it, and he will be very sorry. I might have turned out my pockets to pacify him, but I had all my sweet little letters with me, and he would have recognized the writing. That would have made him very angry. I shall go to London, to Radburn's, and try what I can do at painting. My sister Rose will hear from me constantly. Ever your own.

Radburn was an artist. He had often spoken encouraging words to Eric and tried to prevail on him to give himself up to art. The years passed away and Edith did not see Eric. The discovery which was to clear him was not made. Still, Edith did not doubt him. From Rose she heard about his welfare, and that was all. She set herself to wonder and to wait. If Eric had presented himself she would have risked the loss of fortune, but he kept silent and aloof; so she could only shut up her sorrow in her heart and pray for patience to endure it. She kept in the old house, and had for a companion the widow of a clergyman, whom John Pawson had recommended.

But Edith spent her 21st birthday in Scotland, and it was immediately afterward that she wrote the letter asking for an interview with Eric.

During these three years Eric had worked hard in London, and his friends spoke favorably of his chances in the keen competition of art. He told Radburn about his quarrel with his uncle and the cause of it, and enjoyed the honest sympathy of a true friend. But this Eric was not the Eric of yore. He had a sad look, and went about the work of life as if his heart was broken. His uncle's cruel will was a sad blow to him, and he resolved that unless his name was cleared he would not see Edith again. He never forgot her birthday. His sister Rose had written to say that she was away, and he was wondering where in Scotland she was visiting, and what kind of a birthday she had spent, when John Pawson's letter came. It was like the sight of the journey's end to a weary pilgrim. Eric did not realize before how much he had been suffering, and for the first time since his sorrow he wept bitterly.

The interview was to take place in John Pawson's private room at the bank. Eric was there long before the time appointed, and the two men chatted about various subjects until Edith came. It was a strange meeting for these two, who had not seen each other for three years. John Pawson could not help watching them, and he saw the light of love in their eyes and knew what the end would be, whether the proofs were satisfactory or not.

"Now for business," said John, placing a chair for Edith by the side of his table and seating himself. Eric sat near to her and gazed wistfully into her face.

"First of all, can you tell me the numbers of those notes which disappeared?" Edith asked.

"Certainly," was John's reply. "I have had the book brought in on purpose, and here it is, opened at the right place." He referred to the open page, and told her the numbers.

Then Edith opened a small satchel which she had brought with her, and took from it two packets. The men watched her with breathless attention; but she calmly placed the satchel on the ground beside her, and then laid the larger packet on the table. It was a roll of manuscript, tied with string. The other packet she opened and produced three bank notes.

"These are three notes for £50 each," she said, "and the numbers are the same."

"Where did you find them?" John and Eric asked together.

"Inside that roll of manuscript," she replied.

"What manuscript is it?" John Pawson asked.

"It is the paper which my uncle left for me," said Edith, "and which I was not to open until I reached the age of 21. It was written by my mother, but toward the end there are several pages which my uncle added. My mother was not happy. I think, from what I have read there, that my uncle loved her very much at one time; but she

preferred my father, and married him. She did not live long, but died when I was a baby. Then my father married somebody else, and I am afraid he received a considerable amount of money from my uncle. But he died three years ago, though I did not know it at the time. The very day when Eric's trouble came my uncle received news of my father's death and an abusive letter from the widow saying that the debts amounted to £200; and she said my uncle must send that sum, and send it in notes, not by check or draft. My uncle wrote: 'This shall be my last communication with a proud and extravagant woman. She shall have the money, and then good-by. This is intended only for your eye, Edith.'"

She did not say that her uncle also begged her to be warned by her mother's fate and not allow her affections to be won by any young fellow who cared a great deal more about pictures than about business; but she was to value at their true worth the qualities of a noble and honorable man, who never failed to do his duty, though the man might have youth on his side.

"How came the bank notes in there?" Eric said like a man who could scarcely believe his senses.

John Pawson was examining the notes.

"They have been gummed or pasted to something," he remarked.

"Yes," replied Edith; "they were stuck to the back of one of these sheets." Then she opened the roll and showed where she had discovered them.

"This is my theory," she continued; "My uncle gummed the letter he had received and fastened it to the last sheet. Here it is. Some of the gum must have dropped on the back of this other sheet, and then it must have come in contact with the notes, and three of them adhered, without his being aware of it. He was agitated and angry at the time, and the manuscript was never opened again, for the date on the corner is that same day when Eric's trouble came."

No other explanation suggested itself, or was necessary, but the notes and papers were examined time after time.

"Thank God for this great mercy!" said Eric.

"Amen!" replied John Pawson, devoutly. Edith was silent, but the tears were falling down her cheeks.

Eric kissed her again and again.

John Pawson busied himself with the notes, and there was no atom of jealousy about him.

"They must marry at once," he said aloud; then he checked himself and looked toward the lovers to see whether they had heard him or not.

Yes, they had heard him, there was no doubt about that, so he made a clean breast of it and said:

"This makes no difference to the will. You must not see each other before marriage except in my company or your uncle's fortune will be lost. Lumley and Moss will be on the lookout, I know. I have often wondered what people say to each other when they are lovers, and fate has ordered it so that I shall have to know; but you must bear my presence as well as you can, and for all our sakes make your wooing short."

"We must not tax John Pawson's patience too much, must we, Edith?" was what Eric said, taking her hand in his; then he whispered something more.

Edith whispered something in reply, and then Eric told John that he must bear with them awhile, but they would not trouble him long.

Robert Lumley and Wybert Moss were present when Edith and Eric were married. John Pawson gave the bride away, and Radburn had come from London to be Eric's best man.

"That's all over," said Lumley. "It must have been a queer courtship. John Pawson was with them every time they met. A decent man is John, but not the one I should pick to be with me if I was sweet-heating."

"One's good as another," replied Moss, dolefully. "I feel thousands of pounds poorer than I did."

"Going?" replied Lumley.

"Going?" replied Moss.

"Gone!" they both exclaimed, and there was not a smile between them.—*Cassell's Magazine.*

There is no fairy tale that is better known or more loved by young readers than the story of the poor little cinder-wench, who was so ill treated by her cruel sisters, had such a delightful god-mother, with a magic wand, and was so lucky as to lose her pretty glass slipper only to gain a prince, and become a princess thereby.

Looking over an old book, we came upon an anecdote that is said to have been the origin of this favorite tale. Cinderella's real name, it seems, was Rhodope, and she was a beautiful Egyptian maiden, who lived 670 years before the birth of Christ, during the reign of Ptolemæus, one of the twelve kings of Egypt. One day Rhodope ventured to go in bathing in a clear stream near her home and mean-while left her shoes, which must have been unusually small, lying on the bank. An eagle, passing above, chanced to catch sight of the little sandals, and mistaking them for a toothsome tid-bit, pounced down and carried off one in his beak.

The bird then unwittingly played the part of fairy godmother, for, flying directly over Memphis, where king Ptolemæus was dispensing justice, it let the shoe fall into the king's lap. He, size, beauty, and daintiness immediately attracted the royal eye, and the king, determined upon knowing the wearer of so cunning a shoe, sent throughout all his kingdom in search of the foot that would fit it. As in the story of Cinderella, the messengers finally discovered Rhodope, fitted on the shoe, and carried her in triumph to Memphis, where she became the queen of King Ptolemæus, and the foundation of the fairy tale that was to delight boys and girls twenty hundred years later.

The Bay City Tribune mentions an old resident of Bridgeport who has been a resident of the Saginaw Valley for 47 years, and who owns a farm of 300 acres, of which 200 is cleared. He has been offered \$10 per acre for the oak on his place, of which he has a large quantity. He has seen the cities of the Saginaw Valley grow up out of the wilderness, when there was not a tree cut, and when there was not a building on either side of the Saginaw river.

CONSTANCE'S DIAMONDS.

"I don't think it of much use to take in your trumpery things," said Mr. Juniper of the great firm of "Juniper & Co., dealers in Small Wares and Fancy Goods," as he glanced distastefully at an exquisite white cross, wreathed in passion-vines and drooping lily-bells, which pale little Laura Hyde had just set down on the counter. "Of course, it makes a great deal of trouble for us."

Laura glanced down the long aisle of the store, with satiated shop girls standing at intervals all along. Trouble! It didn't seem possible. But of course Mr. Juniper knew.

"I would sell it very cheap, sir," said she, "Ten dollars, including the shade and stand."

"They're there's our commission," said Mr. Juniper, carelessly, continuing his occupation of writing price checks. "Twenty-five per cent."

"I didn't know it was so much as that," said Laura, a little tremulously.

"Yes," said Mr. Juniper. "But of course you needn't leave it unless you choose. We are not at all anxious for that sort of business."

"I will leave it," said Laura after a minute's hesitation. "For I need the money very much. And I will call to-morrow to see if it has been sold."

"Very well," was the ungracious rejoinder of Mr. Juniper, spoken without lifting his eyes from the work in which he was employed. "Miss Sniffin," he called to a spare, red-haired female, who was just then scolding the girls at the back of the store for venturing to speak above their breath, "take that wax cross and set on the middle counter. Ticket it twenty dollars."

Miss Sniffin obeyed, only to return to the charge.

"Sitting down again, Minnie Blossom?" she cried, sharply. "When you know it's against the rules for a shop-girl to sit down in hours."

"Please, Miss Sniffin, I'm so tired!" said a slight, pretty girl, with hair full of bronze lights like a dove's wing and great blue eyes.

"Tired?" snarled the inexorable Sniffin. "Tired! Don't let me hear that word again. If you know what's best for you. Go to the front at once; there's a customer coming in. And be sure you smile and look happy; we want no glum faces and pale cheeks here."

Miss Sniffin enforced her advice by a vigorous push and pinch, simultaneously inflicted; and Minnie Blossom hurried up the store, flushed enough now to suit even Miss Sniffin's exacting mood.

Miss Constance Etherington wanted a spool of sewing-silk of some unmatchable color and a paper of hair-pins of a Parisian make. She was a tall, beautiful girl, with almond-shaped dark eyes, a skin like cream-colored velvet and a dress of garnet silk, heavily trimmed with the richest of thread lace, and the gold bracelets, set with diamond initials, gleamed and glittered on her wrists, as she tossed over the wares spread out for her inspection.

"A shade darker than this," said she, and Minnie appealed to Miss Sniffin in her bewilderment.

"I cannot find the box of dark purple silks," said she.

"Stupid! On the top shelf!" whispered Miss Sniffin, her lips wreathed into an amiable smile for the delectation of the rich customer, but her words hissing out like the toads and snakes of the old fairy tale. "I shall tell Mr. Juniper to turn you out, Minnie Blossom. You'll never make a salesgirl!"

And Minnie went back to her post, not particularly cheered by this agreeable piece of information.

"Dear me, how pale and tired you look," said Constance Etherington.

"Yes," said Minnie, simply. "I am tired. I have only been here three days, and I'm not quite used to the life—"

She checked herself abruptly as she encountered the stony glare of Miss Sniffin's eyes from the opposite side of the store, and reached up for the box of colored silks. But as she turned with it in her hand her elbow chanced to strike the delicate glass shade of the wax cross which stood close by, and the whole delicate structure fell with a crash to the floor.

Minnie had been pale before, but she turned as white as ashes now and pressed both hands to her heart.

"No matter," said Constance, carelessly. "Don't look so frightened, child; it was only an accident."

"But I shall have to pay for it. It's the rule of the store," gasped poor Minnie.

"Of course," said Mr. Juniper, advancing from his railed desk like a spider out of his hole. "I beg your pardon, Miss Etherington, but we are compelled to enforce these regulations, to prevent culpable carelessness on the part of the young women."

Constance took out her chased gold porte-monnaie. How much is it? she asked impulsively.

"Twenty-five dollars," smoothly answered Mr. Juniper, whose conscience never stood in the way of turning a penny, honest or otherwise.

Miss Etherington threw the money on the counter.

"There it is," she said. "Now, don't fret, poor child," to Minnie. "Mr. Juniper will not reprove you any farther. You hear me, Mr. Juniper?"

The wily proprietor bowed low; Miss Etherington's will was his law to all external appearance. Minnie Blossom looked after her with rapt wonder and admiration as she swept from the store and entered a satin-cushioned landau which waited at the door.

Nor were the little shop girl's only appreciative eyes that followed Miss Etherington's exit. Quite unobserved by the young Juno a handsome, dark-browed man, who was looking at silk neckties a little further down at an opposite counter, had observed the whole transaction.

"She has a heart after all," Marsden Walter said to himself. "Aye, and a warm, womanly one, too. I never believed it before. I fancied her a mere statue of fashionable society. How beautiful she looked with those soft, plying eyes bent on the poor little shop girl!"

And Marsden Walter went away without selecting his necktie.

"Take a dollar off Minnie Blossom's weekly salary and credit it to carelessness," said Mr. Juniper to Miss Sniffin, as he

passed her on his way to the railed spider-hole. Minnie heard and colored hotly.

"But, Mr. Juniper, the young lady—"

"Enough, Miss Blossom," said the proprietor, with a wave of his hand. "I don't discuss business matters with my sales-girls. To carelessness, Miss Sniffin!"

And Minnie choked back the tears, and was forced to assume an unmeaning stumper as a throng of new customers entered.

Mr. Juniper was an exceptionally avaricious, heartless and conscienceless trader, and Miss Sniffin was a forewoman after his own heart. It is fortunate that there are not many such establishments as Mr. Juniper's.

About noon the next day Laura Hyde entered the glittering bazaar of Juniper & Co., and looked anxiously around for the cross on which so many hours of labor had been expended.

"It is sold!" she cried, joyfully. For her landlord was persistent for his rent, and she could get no more fine needle-work to do—the cross was literally her last resource.

"It is sold!"

"I beg your pardon," said Mr. Juniper, dryly, "nothing of the sort. It was broken yesterday. You'll find the pieces in the ash-barrel!"

"Broken?" gasped poor Laura.

"Very sorry," said Mr. Juniper, "but couldn't help it. An accident. You left it at your own risk. We are not responsible."

He was turning crustily away when Minnie Blossom, who had been tying skeins of worsted close by, stepped forward with glittering eyes, and cheeks deep-dyed with scarlet.

"Mr. Juniper," said she, "you have forgotten to mention that Miss Etherington, of Fifth ave., paid you twenty-five dollars for that cross. I saw her do so."

Mr. Juniper whirled around on his heel with the snarl of a savage hyena.

"Minnie Blossom," said he, "you are discharged. Leave the store at once. As for you, young woman," to Miss Hyde, "I will be pestered by no more questions. You left the cross here to sell. It was broken before any opportunity of sale offered. That's all I know about it; and I can't spend any more time chattering."

Laura Hyde had reached the corner of the street, when a light hand fell on her shoulder, and turning, she saw Minnie Blossom.

"Oh, I am so sorry for you," said Minnie, breathlessly.

"Not half so sorry as I am for you, dear," said Laura, seeing tears on Minnie's cheek.

"Never mind, the man was a villain, and we can but starve. As for me, I dare not go to the wretched place I call home without money."

"And I am not much better off," said Minnie, hysterically. "But I know where to go. Miss Etherington was sorry for me. Miss Etherington will be my friend. Come."

And she took Laura's hand as simply as if they both had been school girls. For adversity is a strange reconciler of character.

The next day the elegant dinner at Mr. Etherington's was just served, with its esperges of flowers, glittering wines and temples of tropical fruits, interwoven with silver-grenadine and drooping lily leaves.

Mr. Etherington, his daughter, a lady friend or so, and Marsden Walter were all present—present, but as Constance took her place at the head of the table, her father glanced inquiringly up.

"My daughter, where are your diamonds?" he asked.

For Constance was in full evening dress for a reception which was to follow the dinner. She colored.

"Papa, I have sold them," she said, simply.

"Sold your diamonds?"

"Dear papa, you bestowed them upon me to give me pleasure, and I assure you, the money has been a real pleasure," said the girl, courageously. And she told the story of the Wax Cross.

"They came to me, papa, in their trouble, these two poor girls, educated, beautiful, refined and homeless. What could I do? I knew that Mrs. Raymond's little Rose Cottage was for sale, with its poultry yards and fruit grounds, for five thousand dollars. I knew that there they could maintain themselves in pure country air and respectable independence. I bought it of Mrs. Raymond, and the diamonds paid for it. Have I been rash, papa?"

Mr. Etherington's eyes were dim.

"You have been a good girl, Connie," said he, "although headstrong and impulsive as usual. And now let us have dinner."

That night Marsden Walter proposed to Constance Etherington, and was accepted. He had admired her before, he loved her now as a true, noble-natured woman.

"I used to think you cold and statuesque, dearest," he said. "I don't think I ever should have had courage to ask you to be my wife if it hadn't been for the Wax Cross."—*N. Y. News.*

The Princess's Lover.

Mr. Franz Muller of Spring Hill, Allegheny, is in possession of a tin basin which is a kind of heirloom in Muller's family, as it was presented to his great grandfather at the time he was a soldier in Magdeburg in 1744. The basin is a link in the life of Frederick von der Trenk, the famous Prussian officer, who for a long time was a prisoner in Magdeburg, and about whom is told the following story:

Frederic von der Trenk was born in Königsberg, Prussia, about 1735. As a school-boy he distinguished himself greatly on account of his easy comprehension and the rapidity with which he would grasp the most difficult problems that were invented to tax a school-boy's brains. The consequence was that he was soon ripe for the university, which he entered when but 13 years old. It so chanced that he was not noticed by Frederick the Great, of Prussia, who came to Königsberg while Trenk was a student. The monarch then spoke to the youth very encouragingly, and when Trenk left college to follow his desire of entering the army the King immediately made him an ensign in the Grade du Corps, the crack regiment of the last century. However, the King would not have bestowed such a high honor upon the young man had not his outward appearance been greatly in his favor. The young ensign was at that time considered the finest-looking soldier in the army. He was tall, well proportioned, with a dignified carriage, and his looks were of such genial,

beautiful character that he was called among his comrades the "Prussian Apollo." The partiality which the King at once showed towards the young man made it necessary for him to be frequently around the court, and on one of these occasions it was that the Princess Amalia was attracted by his healthy, rosy lady became interested in the ensign; she threw herself often in his way, and the consequence was at last a mutual attachment between the King's sister and her brother's ensign. All the difficulties which placed themselves in the lovers' way which prevented any tete-a-tetes were easily surmounted by the ardent Princess, who was too inventive in finding a thousand and one reasons for having her young lover around her. But there came a day when the King was told of the clandestine love affair, and his wrath knew no bounds.

Of course his sister he could not imprison, but he thought he might punish both equally severely by sending Trenk into a dungeon. A cause was soon found. He was arrested on a charge of high treason, and the young soldier who had engaged the favor of the King's sister to friendship, who had been the lucky recipient of a Princess's love, was confined to a dungeon, and, as the King intended, for the balance of the prisoner's life.

Trenk was first sent to the Fortress Glatz, in Silesia. He made there several attempts to escape, until he at last succeeded. He flew to Vienna, where he met an uncle of his, who was a millionaire. From Vienna he went to Russia, where he was favorably received by the Empress Elizabeth, who had heard of his imprisonment, and also about his love affair with the peerless Amalia. As she at this time was on very friendly terms with Frederick of Prussia, she did everything she could to please Trenk. She made him a Colonel in one of her regiments, and Trenk would have eventually been able to forget the past had he not unfortunately been sent to Danzig, which at that time was just on the borders of Prussia and Russia. Trenk while in Danzig became very desirous to visit his mother in Königsberg, as he had not seen her for so long, but on the way there he was suddenly kidnapped by Prussian spies and he was now immediately transported to Magdeburg, in Saxony, to be again in Frederick's power. He was here put in a dungeon with chains on his feet, hands, and round his body and neck to prevent another escape.

In the meantime the King, however, had also given vent to his anger by tyrannizing over his sister for her mesalliance with one of his officers. But if the King was harsh, firm, and unforgiving, his sister was to the vow she had made to Trenk, and she loved him the same as ever. The King at last went so far as to make an attempt at forcing her to marry the Crown Prince of Denmark.

The Princess, however, as soon as she heard of this, closeted herself one night in her chamber and moistened her eyes and throat with medicine that had been prescribed for her, with the warning that if it should ever come near her eyes or into her throat it would surround her optics with a red ring, make them constantly running, and it would totally destroy her voice. She stuffed it in her duty. When the King saw his sister the next morning she was the most horrid woman to look at and her voice sounded like the screeching of a raven. Of course the marriage was broken off, but the poor Princess was to the end of her life the most horrible-looking creature and an object of misery.

While Trenk was in Magdeburg he suffered the most brutal degradation from the commander at the prison, although he succeeded gradually in making himself free from his bonds by the aid of the keepers, who were all friendly to him on account of the money he would give them. This money he obtained secretly from the Princess, who asked him to escape as quickly as possible. It was also during this time that Trenk occupied himself with making all sorts of pictures on the outside of the basin or, if you will, the tin basin, and the keepers, to whom he gave them when he had finished them, gave them away. When it became known who was the painter of these basins there was a great demand for them and everybody wanted to have one of Trenk's basins. Trenk said in Magdeburg for ten full years, when the King at last gave him his liberty on the condition that he would leave the country and never return. Trenk left and went to Vienna. Soon after Frederick the Great died, and Trenk was allowed to return to Berlin. Here he had one more pleasure to see his once lovely Amalia. The scene was very pathetic when they met after so many years. Amalia soon died after this, and Trenk again traveled. He went to France. At the time of the revolution he attempted to take a part in the fight himself for the cause of liberty, but he was looked upon with suspicion and thought to be a German spy, and as a German spy he was killed under the guillotine in 1798.

—Pittsburg Commercial Gazette.

"Thank You."

Writing with gentle irony in the New York Sun some one says:—If a person passes you the butter, it is proper to say "Thank you." Or if a person agrees to grant any simple request of yours, it is proper and appropriate to say "Thank you." But there are occasions when this or perhaps any other verbal expression would be unnecessary, if not absolutely inexcusable. If, in response to a passionate and earnest appeal to a young woman that she should illuminate your dismal loneliness, enlighten your bachelor inexperience and assist your solitary helplessness by bestowing her confiding self upon you and placing her future happiness in your guardianship, she should say "Yes," and you should then say "Thank you," the chances are she would throw the whole thing up. Such a reply would knock the bottom out of an almost unfaithful sentiment. A man who would receive a young woman's hand with the same expression with which he would acknowledge a butter-dish, or the return of a blown-off hat, could not appreciate the real value of a woman's love. The proper response of such a priceless gift is made with the eyes, the arms, perchance the lips, but words are out of place.

A certain Lieutenant-Colonel of cavalry was noted for his profanity, but one day he met with a deserved rebuke. Gen. Custer was with him when he rode up to a Sergeant of the guard in his regiment, and, addressing at him furiously, ordered him to attend to a matter that had been neglected. The man folded his arms and stood at bay, looking the officer squarely in the eye.

"Do you hear me?" said the Colonel, with another oath. "Why don't you do as I tell you?"

"When I receive a proper order I shall obey," said the soldier firmly. "The articles of war forbid you to address me in the language you have used."

Gen. Custer laughed, with a keen appreciation of the state of affairs.

"He's got you there!" he said to his subordinate.

The Colonel at once changed his bearing,

patula. When the desired thickness has been obtained the mass is put in a hydraulic press that operates in a highly-heated drying-room. Under the immense pressure of this apparatus there forms a solid block, which is as hard as boxwood or ebony, and which is perfectly plain or has the form of the mold in which the raw material, so ductile when moist and so hard when dry, was compressed. It can be molded into any shape whatever, that of table-legs, chair-rims, rose-work, moldings, etc.

This sort of wood, without pores, sap, fibers and knots, is capable of being worked with the saw, the gouge, the rasp and the lathe. It can be polished, if need be, although this preparation is reserved for the thick black varnish that is applied to it in several coats, with an intervening stay of a night in a very hot, air-heated drying-room. When it comes from the latter the varnish is very hard, and

A merchant relates the following experience: "When I was a young man I set up in trade and took a store where there was another store within a quarter of a mile, thinking I should do more where there were no others, but at the end of the year I found that I had made could be put in my eye. I sat one day doing thinking my lot was a hard one, and told my clerk that I was going out for a while, and that he must keep a sharp lookout for customers. I went down the street, and looking around found that two of the three stores were doing a very good trade. I came together with the owner of one of the stores found out the owner quite a talkative fellow. We put our heads together, and in the course of a week the store directly opposite his received my stock in trade and a barrel of blue paint on the outside, while his received a coat of green. The next day I did nothing but stand at the door and look

"THUS WAS SEVERED ON DANIEL.—" Daniel,"
"Yes, sire."
"Take this Japhet to the treasury and get
a blind dollar for it."
"I will, sire; but why do you call a trade
dollar a Japhet?"
"You know Japhet searched a long time
for his father."
"Yes, sire."
"Well, the trade dollar looked for its par a
long time, too."
Daniel fainted, and it took two interviews
with the bait bottle to revive him.

—

"LONG JOHN" WENTWORTH, who was six
feet seven, and Stephen A. Douglas, the "Lit-
tle Giant," who was five feet four, were mem-
bers of the House of Representatives at the
same time. One day when they stood con-
versing in the area before the Speaker's
chamber, Douglas was bending over and Douglas
was tiptoeing, John Quincy Adams said. "Illinois
now presents us with the long and the short

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Veterinary Department

Conducted by Prof. Robert Jennings, Veterinary Surgeon, Professional adviser to the columns of the Michigan Farmer to regular subscribers free. The full name and address will be necessary that we may identify the person to whom the medicine should be sent. No questions answered personally by mail unless accompanied by a fee of one dollar. Private address, No. 301 First St., Detroit, Mich.

Abnormal Changes in the Milk of the Cow.

CHESAIRE, Mich., March 28, 1887. Veterinary Editor of the Michigan Farmer. I have a cow six years old, which calved the 10th of February; has done well ever since, and gives a good supply of milk; and her milk, and cream when taken from the milk, tastes sweet and good, but before enough can be gathered to churn, it has a sour, bitter and peculiar odor, and the butter is not so good. It is only when the milk is being washed. I am milking three other cows, but the milk of each cow has been kept and churned by itself until I have become convinced it is her milk. She seems perfectly well. It is fed on good clover hay and milk feed (bran and shorts). What can be the cause, and is there any remedy? A SUBSCRIBER.

In answer to the above inquiry, the publication of the following will answer the questions fully and satisfactorily. It is of much interest to dairymen generally, being a lecture by Professor Voelcker, delivered before the Royal Agricultural Society of England:

COMPOSITION OF MILK GENERALLY. Milk is essentially an emulsion of fatty particles in solution of casein or curd, and milk-sugar. The fatty matter of milk, however, is not contained in it in a free condition, but enclosed in a little cell, consisting of the very identical substance which in a state of solution, exists in milk, and which is precipitated when milk gets sour. In other words the butter, or the fatty portion of the milk, is enclosed in curd. I have here some milk globules, and they are of different sizes in different species of animals, and even in animals of the same kind they vary from the 1-2000th to the 1-4000th part of an inch. They are generally round, but sometimes are slightly egg-shaped. The yellow spots represent some of the oil globules, and they are generally found in minute quantities even in sound milk. In addition to the casein, which makes up the milk invariably contains a certain portion of mineral matter, and it is important to notice that this mineral matter consists essentially of the same materials of which the insoluble part of the bone is composed. The ash of milk is rich in phosphate of lime and phosphate of magnesia, or bone earth. Butter, curd, milk-sugar, and mineral substances are the normal constituents of milk. In diseased milk, we find a number of accidental matters which cannot be identified by any chemical test, but may be well identified by means of the microscope. In diseased milk, pus, or common matter, generally manifests itself under the microscope, but even the microscope is not sufficient to detect all cases to prove whether the milk is wholesome or not, or whether it is conducive to the health of animals or the reverse. In many instances the constituents of food, or any substances which have a decidedly medicinal effect, pass rapidly into the milk, and confer the same medicinal properties upon the milk which the remedies themselves possess. Thus if an animal takes castor-oil in considerable quantities, the purgative effect of the oil passes into the milk. Coloring matter, the red color of madder, and the blue color of indigo, the common weeds *mercurialis annua* and *polygala crinita*, likewise, pass into the milk and color it. There is also, no doubt, odoriferous substances which rapidly pass into and give a peculiar taste and flavor to the milk, and when these peculiar favoring substances are infused, they have a decided effect on the milk. Thus we know that the turnip flavor, for example, is readily imparted to the milk. Milk appears white on account of the suspended milk globules. In the measure in which the globules separate in the shape of cream, the milk becomes clearer and acquires a peculiar bluish tint, which is a very good indication of the character of the milk. The less transparent it is the better the more opaque it is the more butter it contains. And allow me here to notice that the quality of the milk is much more regulated by the amount of butter than of cheesy matter. An extensive series of analyses which I have made of milk have brought out this fact, that whilst the proportion of casein varies but in a trifling degree, the amount of butter or fatty matter in milk is subject to very great variation indeed. If you throw a glance at the tables on the wall, you can form an idea for yourselves of the great variations that exist in the amount of butter which a given quantity of milk is capable of yielding. Thus in the first sample of milk you have no less than 7 1/2 per cent of butter in the second, five per cent, in third, 3 1/2 per cent, and in the fourth two per cent. I have separated these analyses from a number which I made some time ago, and I have further increased by analyzing from the month of March to the present, the morning and evening milk of our dairy cows, and greater variations than those given here I have not found. These four examples, therefore, may be safely taken as representing the wide range of the variations which exist between the different constituents of milk. The specimen of milk which is exceedingly rich in butter is derived from a sample from the dairy stock of Mr. Harrison, of Foster Court. The second sample indicates a richer butter than usual. The third fairly represents the composition of milk of average good quality. And the fourth, that of milk of a poor quality, but they are all four genuine milks. They are not in any way reduced artificially, and I ascribe the great richness of the first sample to the extremely good pasture upon which the cows had been fed, at a season of the year when generally, milk becomes richer in quality, but less in quantity. In the months of September and October, and up to November, the quality of the milk very greatly improves, but the quantity recedes and becomes smaller. Whilst, however, this is true generally, it is not so always; for if the animals are stunted in food they yield not only little but also a poor milk, and that at a period of the year when they should be giving the best. What the cause and what the remedy? The cause, and the remedy, I shall have to speak presently more in detail of the various circumstances by which the quality of milk is modified, but before doing so I will point out the great difference in the composition of the milk of different animals.

(Continued next week)

Colic in Gestation in a Mare. MIRA, Iowa Co., Mich., April 4th, 1887. Veterinary Editor of the Michigan Farmer. I have a mare due to foal in about two weeks that has the colic once or twice a week. What the cause and what the remedy? Feed oats, and some bran mixed with hay, water about one-half pailful at a time. Can your colic medicine be given to her with safety? A READER.

Answer.—The cause of the frequent attacks of colic in your mare we cannot satisfactorily explain, without some diagnostic symptoms to aid us. Give but little hay and that of good quality; bran should also be

used sparingly. The bran of the present day will cause colic in some horses. Corn or corn meal should also be avoided. The colic mixture is perfectly safe in such cases when properly given.

Ophthalmia in Lambs. CASCADE, Mich., April 2d, 1887. Veterinary Editor of the Michigan Farmer. Please answer through the FARMER the following questions: What will cure sore eyes in lambs? A sort of film appears to grow on the eyeball. Have used powdered burnt alum, but it does no good. Yours respectfully, CHAS. BUTTRICK, JR.

Answer.—We cannot, from the above brief description, prescribe a remedy for the blindness in your lambs. The eye is an organ too delicate and sensitive to be trifled with. The remedy employed is a powerful astringent. If the disease was acute, the application was not a proper one, and would do more injury than good. We have no means of determining that question. We would advise you to have the lambs examined by a competent veterinary surgeon and be governed by his directions. In the absence of such, have your family physician examine them and send us his opinion, on receipt of which we will advise treatment.

Tumor on Stifle of Mare.—Wolf Teeth in Horses. OLIVET, Mich., April 4, 1887. Veterinary Editor of the Michigan Farmer.

I have a four-year-old mare that has a hard bunch on her stifle joint (I guess you call it); it is loose on the bone and loose from the skin and is about the size of a walnut. I have blistered it a few times but it does not remove it—she has never been lame. Can you tell me through the FARMER what will remove it? Are "wolf teeth" in horses injurious to their eyes? Ought they to be removed when they have them? W. A. CULVER.

Answer.—The tumor on the stifle joint of your mare will require the aid of the surgeon for its removal; which if not connected with the capsular ligament of the joint, will not be difficult. To your second question: no. To your third: it is not necessary. They are natural teeth and belong to the deciduous set or colt's teeth. They usually are shed before the fifth year; but exceptional cases occur where they are found in the jaw of old animals.

Commercial.

DETROIT WHOLESALE MARKET.

DETROIT, April 11, 1887. FLOUR.—Market steady with but little change. Export demand fair, and the output of the product heavy. Quotations are as follows: Michigan, stone process, \$3.00; 00's, \$3.10; 00's, \$3.20; 00's, \$3.30; 00's, \$3.40; 00's, \$3.50; 00's, \$3.60; 00's, \$3.70; 00's, \$3.80; 00's, \$3.90; 00's, \$4.00; 00's, \$4.10; 00's, \$4.20; 00's, \$4.30; 00's, \$4.40; 00's, \$4.50; 00's, \$4.60; 00's, \$4.70; 00's, \$4.80; 00's, \$4.90; 00's, \$5.00; 00's, \$5.10; 00's, \$5.20; 00's, \$5.30; 00's, \$5.40; 00's, \$5.50; 00's, \$5.60; 00's, \$5.70; 00's, \$5.80; 00's, \$5.90; 00's, \$6.00; 00's, \$6.10; 00's, \$6.20; 00's, \$6.30; 00's, \$6.40; 00's, \$6.50; 00's, \$6.60; 00's, \$6.70; 00's, \$6.80; 00's, \$6.90; 00's, \$7.00; 00's, \$7.10; 00's, \$7.20; 00's, \$7.30; 00's, \$7.40; 00's, \$7.50; 00's, \$7.60; 00's, \$7.70; 00's, \$7.80; 00's, \$7.90; 00's, \$8.00; 00's, \$8.10; 00's, \$8.20; 00's, \$8.30; 00's, \$8.40; 00's, \$8.50; 00's, \$8.60; 00's, \$8.70; 00's, \$8.80; 00's, \$8.90; 00's, \$9.00; 00's, \$9.10; 00's, \$9.20; 00's, \$9.30; 00's, \$9.40; 00's, \$9.50; 00's, \$9.60; 00's, \$9.70; 00's, \$9.80; 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00's, \$76.90; 00's, \$77.00; 00's, \$77.10; 00's, \$77.20; 00's, \$77.30; 00's, \$77.40; 00's, \$77.50; 00's, \$77.60; 00's, \$77.70; 00's, \$77.80; 00's, \$77.90; 00's, \$78.00; 00's, \$78.10; 00's, \$78.20; 00's, \$78.30; 00's, \$78.40; 00's, \$78.50; 00's, \$78.60; 00's, \$78.70; 00's, \$78.80; 00's, \$78.90; 00's, \$79.00; 00's, \$79.10; 00's, \$79.20; 00's, \$79.30; 00's, \$79.40; 00's, \$79.50; 00's, \$79.60; 00's, \$79.70; 00's, \$79.80; 00's, \$79.90; 00's, \$80.00; 00's, \$80.10; 00's, \$80.20; 00's, \$80.30; 00's, \$80.40; 00's, \$80.50; 00's, \$80.60; 00's, \$80.70; 00's, \$80.80; 00's, \$80.90; 00's, \$81.00; 00's, \$81.10; 00's, \$81.20; 00's, \$81.30; 00's, \$81.40; 00's, \$81.50; 00's, \$81.60; 00's, \$81.70; 00's, \$81.80; 00's, \$81.90; 00's, \$82.00; 00's, \$82.10; 00's, \$82.20; 00's, \$82.30; 00's, \$82.40; 00's, \$82.50; 00's, \$82.60; 00's, \$82.70; 00's, \$82.80; 00's, \$82.90; 00's, \$83.00; 00's, \$83.10; 00's, \$8